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ABSTRACT

This policy statement focuses on the policies and practices of graduate education and how they are being affected by the accelerated development of distance education at the postbaccalaureate level. Following an introduction and a review of two earlier policy statements (1977 and 1989), the discussion examines the current context of the rapidly developing area of distance graduate education, including the emphasis on accountability for educational investments, admissions policies that increase student diversity, and the revolutionary changes in information technology. Other sections of the report focus on the defining elements of nonresidential, off-campus, and distance education; provide an historical perspective on American distance education; examine the mission, market, resources, competition, and the new learning paradigm for distance graduate education; examine the nature of graduate education and the role of graduate administration; and discuss distance graduate education policies and practices, including quality assurance and equivalency, generic institutional policies and practices, faculty issues, organizational issues, program design and delivery, collaborative groups, testing and evaluation, faculty-student interaction, mentoring, student-student interaction, instructional resources, and student support services. A final section discusses distance education outcomes, including student and faculty evaluation, student achievement, and student career outcomes. (Contains 23 print and 6 electronic references.) (RAB)

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ED 442 359

POLICY STATEMENT

DISTANCE GRADUATE EDUCATION: OPPORTUNITIES AND CHALLENGES FOR THE 21ST CENTURY

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N. Gaffney

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FOREWORD

This policy statement focuses on the policies and practices of graduate education and how they are being affected by the accelerated development of distance education at the post-baccalaureate level. It will not analyze the increase in part-time graduate study and the increasing demand, by students and employers, for educational credentials. It will not dwell on the costs of education and the increased desire, on the part of universities, to provide educational services to an expanding group of applicants without constructing additional facilities or significantly increasing the size of their faculties. Finally, it will not describe education delivery mechanisms like interactive audio-video or the Internet. These have all been dealt with at great length elsewhere. Instead, it will assume these things and use them to develop a context for defining issues and exploring their consequences for graduate education.

Distance education is not a new phenomenon. It came into being with the invention of books and other printed materials that made it possible for people who could not go away to school to study the works of scholars and acquire an education--on their own time and in their own place.

Eventually, two kinds of distance education evolved. One--the correspondence course--involved students receiving written materials, usually by mail, being tested on their grasp of that material, also by mail, and eventually receiving confirmation of credit or degrees earned from the purveyor of the program. The other involved instructors who might be either itinerant teachers or faculty members from some local institution going to remote sites and meeting with groups of students gathered there for the purpose of obtaining instruction. These are very different models, the first operating with each student individually, and the second with groups in more or less traditional classes in nontraditional (i.e., off campus) settings.

These models continue in use today but are changing rapidly, due primarily to technical innovations and new relationships among education providers. Students, faculty, and administrators are faced with a bewildering array of options for the continuing development of graduate programs and post-baccalaureate education. We hope this book will serve them as a guide and a touchstone for sound academic practice.

We are grateful to TIAA-CREF for their generous support of this project.

Jules B. LaPidus
President
Council of Graduate Schools

September 1998

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POLICY STATEMENT

DISTANCE GRADUATE EDUCATION: OPPORTUNITIES AND CHALLENGES FOR THE 21ST CENTURY

INTRODUCTION

This is the third policy statement on distance education published by the Council of Graduate Schools (CGS). Each publication reaffirms the Council's abiding commitment to quality in the development, delivery, and oversight of graduate education, as well as to the dissemination of policy perspectives and best practices for the graduate community. As cultural artifacts, these publications also reflect and provide insight into the changing context and dynamics of graduate education during the last quarter of this century.

The 1977 Perspective

In June 1977 the Executive Committee of CGS issued a policy statement entitled *Non-Residential Graduate Degree Programs*. As deconstructionists might surmise from the negative characterization implied by the "non-residential" qualifier, the Council leadership evinced concern about the "rapid" increase in these programs. According to a 1975 CGS survey of member institutions cited in the publication, at least 54 were offering a total of 127 external graduate degree programs. These data provide an interesting, though not fully equivalent, benchmark for comparison with a 1994 CGS survey in which 140 out of 257 institutions reported that all or a majority of degree requirements in 153 master's and 19 doctoral programs could be met in a technology-based distance education mode. While encouraging "the healthy growth" of nonresidential programs, the authors of the 1977 policy statement nevertheless noted concerns about "territoriality, responsibility and jurisdiction, and motivation as well as questions regarding the quality of courses and programs" (p. 1). As this litany attests, "*plus ca change, plus c'est la meme chose*."

The 1977 distance education document calls first and foremost for vigilant control and oversight of off-campus graduate programs by state agencies and regional accrediting associations. Indeed, the authors recommend that instead of accrediting an institution "as a whole," regional associations engage in more specific and selective accreditation (e.g., giving overall approval for offering on-campus master's programs, but approving only specifically identified off-campus master's programs at specified locations.

Consonant with this focus on external oversight, the 1977 document states that institutions should obtain both state agency and regional accrediting association approval before offering a nonresidential graduate program, having first demonstrated that the program is appropriate to the institutional mission and fulfills unmet needs. Vis-à-vis any proposed external programs, the CGS statement moreover admonishes the institution to demonstrate that they are "essentially equivalent in quality to comparable graduate programs offered on the home campus...." (p. 3). Ascertaining comparability involves examination of the following indicators:

faculty qualifications and compensation;
program and course approval procedures;
curriculum level, demand, and the intensity and duration of effort required;
standards for admission, guidance, and evaluation of students;
library, laboratory, and other instructional support resources;
accessibility to home campus faculty, library, and other resources;
home campus oversight for program quality; and
home campus graduate administrative monitoring.

Given this goal of ensuring the equivalence of on- and off-campus offerings, it is not clear why the 1977 document recommends that university transcripts separately list credits earned in off-campus programs and include, as well, information identifying the site where the work was done. While this recommendation does not stand the test of time, the caveat about maintaining equivalency in the quality of all degree programs, regardless of place of delivery, is still a valid guideline. Moreover, the indicators listed above are still regarded as quality benchmarks by graduate deans and graduate councils.

The 1989 CGS Statement

During the decade following the 1977 CGS publication on distance education, member institutions experienced a rapid growth in graduate student enrollment and a concomitant increase in degrees awarded. Even more dramatic was the change in the composition of the graduate student body, with part-time students now constituting a majority of graduate students pursuing degrees. Responding to their part-time clientele's needs, many universities began to offer more off-campus graduate programs as they explored the potential for innovative delivery systems afforded by advances in telecommunication technologies. Noting these developments, the Council of Graduate Schools issued a new distance education publication in 1989, entitled *Off-Campus Graduate Education.*

Acknowledging that a "complex and changing world requires new knowledge and advanced skills, as well as new methods and places of instruction" (p. 1), the 1989 document notes the increasing need for post-baccalaureate education for job maintenance and promotion, enhancement of professional opportunities, and intellectual and cultural enrichment. The publication also cites the increase in the cohort of time- and place-bound potential graduate students, aged 30 to 45; and it briefly mentions new telecommunications delivery of graduate courses and predominantly of nonthesis master's programs to these adult learners.

While referencing the emergence of technology-based delivery modes, the "distance" education in the 1989 publication is essentially the same as that in the 1977 document. That is, both focus on "off-campus" program delivery, typically by peripatetic professors, at designated sites such as off-campus centers or branch campuses. Unlike the 1977 document, however, the 1989 publication focuses on internal institutional planning and decision-making, with particular attention to the role of the graduate dean in quality oversight. Far from being the "drivers

and traffic cops," external organizations (state boards, commissions of higher education, and accrediting bodies) are simply referenced as a possible "Need approval" item on an administrator's list of things to do.

Reiterating the 1977 publication's emphasis on the importance of an off-campus program's consonance with an institution's mission, its responsiveness to documented educational need, and its assurance of high quality, the 1989 statement cautions institutions to avoid over-extension of resources and to maintain a balance between quality and outreach. As in the earlier document, the *sine qua non* for off-campus program quality is comparability with on-campus programs, ensuring "that the name of the degree and the institution from which is it earned mean the same thing, regardless of how or where the degree is earned" (p. 6). Elaborating on the observation that "same" need not mean "identical" in all respects, the 1989 statement asserts:

> "The essential point is to create a program for off-campus students which accomplishes (often in a unique way) the same educational objectives as programs developed for on-campus students, i.e., to make off-campus graduate education truly a *graduate* experience" (p. 6, italics in original).

While retaining essentially the same quality elements that were included in the 1977 publication, the 1989 academic guidelines provide a more detailed delineation of the quality indicators along with a list of procedures and administrative support systems for off-campus endeavors. The updated publication advises that off-campus graduate degrees should be offered only in fields of on-campus academic strength and where the institution can provide adequate support in cognate areas. Among the new recommendations is a specific assignment of evaluative responsibility to the graduate dean in the off-campus program review process.

The Current Context

Now, less than a decade following the 1989 statement, CGS is issuing another distance education publication. During this *fin de siecle* period, graduate education has experienced even more rapid and significant changes than in the previous decade. Having navigated through anticipated currents and ripples of change, we find higher education surfing--and at times bailing water--in a sea change of challenges and opportunities.

Accountability has been a mantra during the 1990s. With increased public demand for accountability for use of public funds and for worthiness of public trust, universities are expected to demonstrate or, indeed, prove to society that higher education is "worth it." The public has questioned whether our tuition pricing is justified and wants to know how the imparted knowledge and skills add value to individuals' lives and contribute to societal betterment. Perceived incompatibilities between universities' teaching and research activities have fueled debates about the value of basic research. Some applied research activities have fared better with new consumers. As competitive challenges of the global economy have increased, the public has asked universities to ramp up what heretofore had been an implicit part of their

mission--that is, the demonstrable advancement of both state and national economic development and competitiveness.

More recently universities' admissions policies have attracted public scrutiny, and legal decisions have proscribed affirmative action practices that historically have opened opportunity and increased diversity on our campuses. With admissions policies now an ideological battleground, assuring broadened access to higher education, and indeed to the American dream, is all the more challenging and urgent. In responding to all of these challenges, universities are finding that they need to improve their communication with both on-campus and external constituents, including potential students, parents, alumni, donors, elected officials, and the general public.

All of these crosscurrents are surging at a time of revolutionary change in information technology. As already noted, the 1989 CGS distance education statement acknowledged the advances and potential of new telecommunication systems. By then, personal computers, with their promise of operating in distributed networks, were appearing on desktops and challenging the giant (but relatively limited) mainframes, and facsimile machines and mobile telephones were becoming commonplace. Far from reaching a plateau, the power of computer innovations has been doubling every few years, and their costs have concomitantly been diminishing, making them affordable to increasing numbers. With the development of the Internet, global connectivity has increased exponentially. A 1998 U.S. Commerce Department study reported that Internet traffic was doubling every 100 days, with more than 100 million people on line (see <http://www.ecommerce.gov>). To reach an audience of 50 million, radio took 30 years and TV took 13. The Internet, however, took only 4 years.

Inevitably with the increasing utilization of digital information and communication networks in the daily conduct of university teaching and research, change is rapidly occurring in many aspects of the physical and organizational environments in which fundamental academic principles have operated. The possibilities for distance education that were in early stages in 1989 are now, by and large, technically feasible and are being realized in diverse applications. Advanced terrestrial and satellite communications, computers, networking, and shared software databases present opportunities for education delivery systems that are flexible, time- and place-independent, and learner-centered. Utilizing the new telecommunication technologies, along with new instructional designs and strategic partnerships, universities (and others) are now positioned to meet education challenges at the state, national, and international levels, and increasing numbers are doing so.

Particularly with technology-based distance education, the operation of the university as the locus of learning is changing. Indeed, there are prophesies that campuses will disappear as learning increasingly becomes a distributed activity. Regardless of their identity as "places" of learning, universities--and also other corporate entities--now have the capability of better meeting the ever-growing demand by employers and

learners alike for continuing, part-time, post-baccalaureate education. Both educators and the public are realizing that in our knowledge economy, a university degree no longer provides a knowledge base to support a lifetime career.

As university officials charged with responsibilities for graduate education, our challenge is to remain steadfast in our commitment to quality as we work with our colleagues in developing new methods of transforming information into knowledge, of sharing and creating knowledge in virtual learning communities, and of assessing competency and excellence within nontraditional delivery modes.

Given the dynamic nature of distance graduate education, CGS is issuing this publication via its website so that it is immediately accessible and modifiable. It seems fitting that CGS's first online policy statement is one that examines the use of technology in graduate education. The CGS membership has contributed substantially to this statement, and we are providing a venue to welcome continued input.

NONRESIDENTIAL, OFF-CAMPUS, or DISTANCE EDUCATION: WHAT IS IT?

As the terms "nonresidential," "off-campus," and "distance" in the titles of CGS publications convey, there are many ways to characterize graduate education that is delivered to students who are remote from the site of origin and thus "away" from the familiar on-campus classroom. Just what does "away-ness" or "distance" entail? If we (erroneously) consider the "traditional" on-campus, full-time graduate degree experience as the norm or even the ideal--as many of our colleagues and critics tend to do--then why would we deliver it any other way? And if we did so, then what are essential elements in our normative on-campus delivery that must be "equivalently" available in any distance program for the graduate community to conclude and for the public to be assured that it is a *graduate* experience? These are overarching themes in our consideration of opportunities and challenges of distance education. Like its predecessors, this publication highlights issues, reaffirms enduring quality commitments, provides guidelines, and cites what may become an expanding set of examples of good practices along with references to some useful sources.

Distance Education: Defining Elements

Essentially, distance education is a process of extending learning by connecting students with distributed learning resources (cf. American Council on Education, 1996). This distribution typically alters at least some elements in space and time relationships that connect students with faculty, with other students or with facilities that are typically found in the single institution, on-campus learning environment. At minimum, all distance education involves separating some or all learners from the site of instructional delivery of the institution(s) or organization(s) providing the educational experience. In addition, in distance education:

some or all **students** may be separated from the **instructor** in **place** or in **time**, and the separation(s) may occur for some or all of the learning activities;

some or all **students** may be separated from **other students** in **place** or in **time**, and the separation(s) may occur for some or all of the learning activities; or

some or all **students** may be separated from **campus-based learning resources and experiences** (libraries, labs, computer rooms, formal and informal meeting opportunities, etc.) to an extent that makes their utilization infrequent or impossible and necessitates development of alternative resources.

Types of Separation in Distance Education Delivery Modes

Place or Time Distances in Off-Campus Education. The modal type of distance education addressed by the two previous CGS publications involves "off-campus" courses and degree programs at specific sites away from an accredited higher education institution's "main campus," where the major portion of its instruction is conducted. In off-campus distance education, the essential "distance" is between the site and the campus (and its learning resources), but there is no place or time separation between and among students and faculty since they interact face-to-face in the classroom. The off-campus distribution of learning resources thus preserves **synchronous communication**, which occurs when communication partners are interacting simultaneously (in the same or in different locations).

Usually in off-campus delivery, a regular or adjunct faculty member travels to an off-campus site to deliver the "same" (on-campus) course in the same format (e.g., lecture or discussion), with the same assignments, examinations, and evaluation criteria. The off-campus students who are enrolled in the course (and possibly in a complete off-campus graduate degree program) have academic qualifications that are equivalent to those of their on-campus peers.

Place or Time Separation in Other Distance Education Delivery Modes. In contrast to the off-campus, peripatetic professor model, many other distance education delivery modes involve physical separation of faculty and students, and also, at times, separation of students from each other. The original purveyor of this type of distance education, which developed in the 19th century, is the correspondence course offered by universities as well as commercial correspondence colleges. These courses involve a relatively slow form of **asynchronous communication**, in which communication partners do not engage in person-to-person interaction simultaneously. In this mode, students experience place and time separation not only from the instructor but also from other learners and from on-campus facilities and enrichment activities. Sharing some of the same characteristics of correspondence courses, other early types of delivery modes that extended educational experiences beyond campus borders without a travelling professor included radio broadcasting and TV (e.g., the Sunrise Semester).

Evolving from the original one-way radio and "talking head" TV lecture

presentations, video signals now can be compressed and sent along existing telephone lines, providing two-way video and audio connections among various sites to simulate traditional classrooms in a "high tech" manner. Remote access from home or elsewhere, using high-speed communication links, provides connectivity anywhere. Because of its connectivity to a rich array of textual, visual, and aural learning resources, the Internet is gaining wide application in both on- and off-campus courses. The array of technology-based distance education delivery systems includes the following:

- one-way audio (e.g., radio, audio-cassette);
- one-way live or prerecorded TV or video;
- audiographics (combining voice with computer graphics);
- two-way audio (e.g., phone conferencing);
- two-way audio with one-way video;
- two-way interactive video;
- two-way online (computer-based) interactions during instruction; and
- other computer-based technology (e.g. Internet).

Some of these distance education delivery modes require student attendance at specialized facilities (e.g., two-way interactive television rooms). With other systems, the site of delivery of course material may be the student's radio, tape recorder, TV, VCR, or computer at home or at work (or wherever). The student may or may not be required to attend course discussion sessions led by a facilitator at designated sites.

In addition to separation in location, some distance education deliveries also entail separation in time for some or all of the student-faculty or of the student-student learning activities. While some courses are offered in "real time," others occur in "virtual time," which allows students to access course instruction and materials at their own convenience. Similarly, some or all out-of-class interaction between faculty and students or among students may be synchronous (at a designated place or via toll-free telephone, teleconference, Internet chat room, etc.) or asynchronous (e.g., via regular mail, e-mail, computer bulletin boards, or other online access).

Separation from Learning Facilities and Venues. Whether or not students are separated from faculty or from other students in terms of place or time, in all distance education delivery modes students typically have limited (or perhaps no) physical access to campus-based learning facilities and experiences that are available to on-campus students at a typical accredited institution. Generally, however, specific course or program resource needs are met by electronic links with the institution's library or by appropriate cooperative agreements with other libraries, special computer rooms and laboratories, and by online access to wide area networks like the Internet.

More problematic in distance education is the relative lack (or complete absence) of opportunity for students to engage in campus-based enrichment activities. Activities and experiences such as colloquia, visiting lectures, departmental journal clubs, informal brown bag seminars, coffee room conversations, and exchanges in the graduate assistants'

room provide context and informal learning that many deans and faculty consider important (if not essential) for a "graduate experience." In combination with course experiences, the intellectual interactions in these other venues contribute not only to the dissemination, discovery, and creation of knowledge, but they also promote professional socialization and a shared culture of learning. By and large, designing and providing "equivalent" experiences in the distance education context is a challenging work in progress.

THE CONTEXT OF AMERICAN DISTANCE EDUCATION

With many variations, therefore, distance learning connects students to human and physical learning resources that are distributed and packaged differently from the familiar gestalt comprising these resources in the on-campus setting. Seen from an historical perspective, distance education exemplifies a central quest in the American experience to find what works for given purposes.

Historical Perspective

Evolving from the first A.B. degree conferred by Harvard in 1642, the whole system of "traditional" American higher education represents an amalgamation and adaptation of models from time-honored European systems (cf. Graham and Stanley, 1997). To this day, pragmatic American educators have been identifying and adopting educational practices that work and abandoning or modifying those that do not, whatever the philosophical or conceptual implications of that process. The degrees that have been developed in the American system of higher education are embedded in a unique model, much envied and often emulated throughout the world.

The American Degree and Credit Systems. Taking "final" shape at the turn of this century, the American higher education system involves a step system of degrees. Beginning with a bachelor's degree that adapted the English tutorial and the Scottish lecture and examination models, the system continues with the master's degree that originally was adapted from the French equivalent, and it culminates in an adaptation of the German Ph.D., consisting of seminars, specialist lectures, and the research dissertation. Associated with this degree hierarchy is a system of earned and recorded credit that enables individuals to drop out of this structure and easily reenter it at a later point in life. By its very nature, therefore, the American higher education system facilitates learners' access to lifelong education.

Other developments add to the breadth and flexibility of universities' educational offerings and to their adaptability to distance education. In doctoral education, a number of institutions now are offering professional degrees such as the Ed.D., D.A., Psy.D., and D.PA. The master's degree has been continually redefined during the latter half of this century, responding to the perceived needs of professions and employers and of an entire generation of students that includes groups that have been historically underrepresented among graduate degree recipients (cf. Council of Graduate Schools, 1994). Evolving beyond the generic Master of

Arts and Master of Science titles, there now are almost 1,000 distinct titles for master's degrees (Peterson's, 1997) covering three diverse functions: a) traditional scholarly training as an end in itself or as a step toward a doctoral degree; b) professional education in a vast array of disciplines, many of which did not exist a generation ago; and c) avocational study for those seeking certification of advanced learning for its own sake.

In addition to the "big three" in degrees, universities have developed specialized certificate programs that package discrete learning topics or skill sets. As the CGS publication, *Certificates: A Survey of our Status and Review of Successful Programs in the U.S. and Canada* (Council of Graduate Schools, 1998) documents, certificates are now a growth industry in graduate education. In some instances the courses comprising a certificate program are part of a graduate degree program, and some master's degrees now are being designed as a combination of separate certificate modules. Given these developments, it is not surprising that master's degrees and certificates, particularly in professional fields, are becoming even more popular than before in distance learning delivery.

Off-Campus/Distance Developments. Off-campus education has a long tradition in the delivery portfolio of higher education institutions. A significant part of the mission of land-grant institutions that developed during the latter half of the 19th century involves off-campus delivery of practical education to rural and underserved communities through formally structured units such as the cooperative extension service, agricultural experiment stations, and continuing education units. Other colleges and universities also engage in distance education through various outreach and continuing education activities, using a variety of delivery modes. These offerings may be organized by independent departments or by separately designated units within a university (that may or may not operate independently from academic departments). Moreover, the off-campus or distance offerings run the gamut from workshops and specialized short-term contract courses and certificate programs to core courses and complete undergraduate as well as graduate degree programs (that may or may not be under the aegis of an institution's graduate dean).

WHY DISTANCE GRADUATE EDUCATION?

Given the proven success and international acclaim of the on-campus model of American graduate education, which attracts talented students worldwide, why does a university "take its graduate degree programs on the road" (or on the information highway)?

Mission

While the relative emphasis varies among land-grant, other public, or private institutions, all universities have service to society as their core mission in their functioning as the preservers, disseminators, and creators of knowledge. As just noted, distance education promotes the fulfillment of universities' service missions by enabling them to share knowledge and meet the higher education needs of

learners outside of a traditional campus setting.

Increasingly, as part of their service to society, universities are being asked to augment their contribution to regional economic development beyond the traditional "technology transfer" of providing an educated workforce and advancing knowledge. With state resources, many universities are partnering with industry and government in focused, applied research and in development of new technology to promote economic competitiveness. New job creation and enhanced economic productivity are dependent on well-educated employees whose knowledge and skills are continually upgraded so that they remain *au courant* of the latest (and often rapidly changing) advances in their work area. Universities (and others) thus can play an expanded service role in meeting work-related as well as other post-baccalaureate education needs of employed adults.

Just as the evolution of technology is directly affecting the teaching and research environment within university settings, it also affords expanded opportunity for meeting this ever-increasing demand for continued education by learners outside of campus borders. Distance courses and programs from over 700 accredited four-year colleges and universities in the United States and Canada are listed in the 1998 edition of *Peterson's Guide to Distance Learning Programs* (1998), compared with offerings from only 93 institutions listed in 1993. According to a national survey of 2- and 4-year public and private higher education institutions (National Center for Education Statistics, 1997), one third were offering distance education courses in 1995 via audio, video, or computer technologies, and another quarter indicated that they planned to offer technology-based distance offerings during the next 3 years. Increasing student access was cited as a major goal for these distance education programs, along with ancillary objectives of making courses available at convenient locations and reducing time constraints for course taking.

Market

As just suggested, perpetual learning is an important paradigm shift of the U.S. knowledge economy. To remain competitive and maximize their earning potential, increasing numbers of employed adults need continual post-baccalaureate education, but they often cannot take time out for full-time, on-campus pursuit of graduate courses and degrees.

Both previous CGS publications on distance education noted the increase in off-campus graduate offerings during the time period preceding their publication. Remarking on a continuing trend, the 1989 document also cited the dramatic overall rise in part-time graduate students, who today constitute over one half of the graduate population. When the 1989 statement was published, new educational technologies were in early stages of utilization to meet distance education needs of students who could not be served by the traditional off-campus delivery. In the ensuing years, technology-based applications have increased almost exponentially, as have the numbers of adults engaged in some form of distance education. According to one national survey (National Center for Education Statistics, 1997), in 1995

more than 750,000 students were formally enrolled in over 15,600 undergraduate and 7,500 graduate technology-based distance education courses offered by higher education institutions. Given the rapid expansion of distance learning opportunities, these numbers now are likely to be considerably higher.

The New Learners. Campus-based graduate programs are still attracting "traditional" full-time students who have just graduated from baccalaureate programs. For over a decade, however, the real growth in graduate education has been coming from so-called "nontraditional" students who are most likely to be female, part-time (with numerous other work and family responsibilities) and older. These demographics apply as well to the predominant segment of the market for graduate distance education. Combining work with learning and taking one or two courses at a time, with or without a degree objective, these student consumers oftentimes gauge the "value" of their investment in education in terms of job attainment or promotion. Many thus are less concerned about the traditional measures that universities use to define quality institutions.

Increasingly, these students are likely to see themselves as shoppers for their educational needs, accessing an increasingly diverse array of learning opportunities offered by an increasingly diverse set of providers to find courses that match their learning styles and conveniently meet their time and place constraints or preferences. Since convenience frequently represents an overriding consideration and since many of these students--especially the younger cohort of college graduates--are computer literate and comfortable with all sorts of technology, these new learners are increasingly choosing technology-based distance education programs.

As we shall note in discussing the competition for the new learners, single-campus, nonprofit universities no longer have a monopoly in the higher education market. Statewide or multi-state consortia, virtual universities, for-profit universities, and corporations are responding to the demands from new learners. All of the military services, as well, are increasing their involvement in distance education. Currently the Army is investing over $800 million in a multi-year Total Army Distance Learning Program to provide global access to training through the use of interactive video, CD-ROM, computer-based instruction, and the Internet.

Resources

As the demand for higher education and lifelong learning increases, states are concluding that they cannot afford to meet enrollment projections by building new campuses. Many have expanded their distance education programs, and new public institutions have been developed in California, Maine, and Florida, for example, with specific mandates to use technology and virtual campuses to meet learner needs.

While technology is often regarded as the major avenue for increasing educational services without significantly increasing levels of support, it remains to be determined just how cost-effective technology-based distance education will be. Acquiring

and maintaining the technology, training faculty for effective use of new delivery modes, and providing necessary facilities, services, and ancillary experiences for students in distance education programs entail significant up-front (and continuing) costs. Since many universities cannot afford to exploit new technologies for educational purposes on their own, partnerships are developing among universities to share technological as well as academic resources. Partnerships are also developing between universities and publishers and telecommunications companies. The locus of degree-granting authority varies with the consortial arrangement.

University Consortia. In many consortia among universities, the member institutions retain the authority to grant credit and award degrees, and credentialing authority does not shift to the consortium. Examples of such consortia include the California Virtual University, which uses the Internet to deliver credits and degrees from participating public and private California campuses. Similarly, the Education Network of Maine delivers associate's through master's degrees offered by participating Maine institutions and negotiates with out-of-state sources for needed degrees that are unavailable in Maine (e.g., a Master of Library and Information Science degree imported from the University of South Carolina). An actual multi-state consortium is the Southern Regional Electronic Campus, an initiative of the Southern Regional Education Board, which enables students across the South to connect via the Internet with more than 50 institutions for information on distance education offerings, registration, and support services.

In addition to consortia in which credentialing authority is retained by the individual members originating a degree, there are partnerships in which the certificate or degree authority is vested in the organizing entity itself. A well-known, long-standing example of such an arrangement is the National Technological University, established in 1984. NTU is a separately accredited institution that uses satellite transmission of on-campus courses from the engineering colleges of 46 member universities to deliver graduate certificate and master's programs to engineers in participating companies and agencies at over 1,000 sites.

Virtual Universities. While all of the just-cited examples of distance learning consortia use technology for course delivery, virtual universities are distinguished by the fact that most, if not all, of their instruction is technology-based. The "venerable" pioneer virtual university, the British Open University that was founded in 1969, has been replicated in many countries, serving educational needs of millions of students. more recent virtual university with no physical campus is the Western Governors University established in 1996. WGU involves an extensive partnership among the governors of 17 states and a U.S. territory along with 12 corporate partners to develop competency-based, degree-granting programs delivered through advanced telecommunications technologies and the Internet.

Competition

Another facet of the resource issue relates to competition and the threat of decreased market share. Very likely, for the foreseeable future, internationally recognized Research I universities will continue to attract more highly talented applicants than they can admit for full-time, on campus study. Particularly for doctoral degree preparation, the traditional face-to-face interactive delivery in the enriched campus environment is a model without peer. By combining graduate courses, seminars, and informal learning experiences with apprenticeships in teaching and cutting-edge research guided by expert faculty mentors, this model produces superbly educated scientists, teachers, and leaders. Moreover, the dynamic partnership of experienced faculty and creative student colleagues advances research and scholarship.

But what about the more 1,000 non-Research I institutions that offer some level of graduate education? Following a period of relative stability, graduate enrollments have decreased, at least at CGS member institutions. It remains to be seen whether this change is a blip or the beginning of a downward trend. In addition, as noted previously, graduate matriculants now are preponderantly part-time, with even the on-campus students pursuing degrees at a relatively slow pace because of work, family, financial, or other commitments. These changes are problematic for public institutions whose state appropriations are tied to student credit-hour enrollment. Where this is the case, graduate enrollments usually yield more return; therefore graduate administrators and faculty must compete vigorously for graduate student market share to meet enrollment targets.

As already noted, there is a substantial and growing market for higher education, particularly for flexibly scheduled, conveniently located part-time offerings. One report (Dolence, 1998) indicates that adult learners are almost equally divided among those motivated primarily by personal enrichment goals and those seeking work-related learning. For the reported 40 million adult learners seeking work-related learning, less than one fourth are served by nonprofit educational institutions, even though provision of this education falls within these institutions' service mission.

Education is becoming big business, and many for-profit institutions are emerging to meet market demand. The University of Phoenix, for example, is the largest U.S. virtual university, offering employed adults an array of mainly professional programs, including a complete M.B.A. To meet their needs and avoid perceived inflexibilities of university calendars and programming, corporations are increasing their in-house and extended education. Whereas in 1988 there were about 400 corporate universities, by 1996 over 1,000 were spending more than $1 billion annually.

In the emerging global free market for graduate education, competition for the "new majority" student is increasing and presents a challenge to universities who must contend not only with comparable institutions but also with virtual or mega-universities as well as other providers. As they compete with corporate universities, nonprofit

universities are both advantaged and disadvantaged by their missions. Universities are not businesses--even though it is fashionable in some quarters to characterize students and other stakeholders as "customers." Universities are, however, enterprises that must deliver high quality education cost-effectively and in a manner that meets learners' needs. Not only does that impact their viability in a very competitive marketplace, but it is part of their obligation to society.

To provide increased access both to on-campus and distance graduate education, universities need to preserve quality, develop sophisticated management systems, increase their cost-effectiveness and productivity, and (possibly) create partnerships. Institutions will be successful competitors to the extent that they offer educational services that are valued by enrolled and potential students (and their employers) at a competitive price and at a quality level that is better than what is offered by other providers. The quality issue is paramount. Ours is an intellectual and social heritage, and the educational process involved in a graduate degree must be more than "job training." In addition to specific expertise, it is the perspectives and values developed in graduate education that are needed in this new knowledge economy.

Innovation Opportunity

Given the competition, universities may conclude that at some level they have a choice between being victims or architects. Actually, the competitive necessity can be an exciting opportunity. The new technologies present new ways of distributing learning resources, new opportunities to involve learners who could or would not participate in the on-campus setting, new challenges for communicating and interacting to share and develop new knowledge, and new challenges for measuring educational effectiveness and quality. Universities are, after all, learning institutions, and technology-based distance delivery is a learning challenge and pioneering venture. Can we create virtuous as well as virtual universities that can fulfill our ideals for accessible and effective quality education?

As previously acknowledged, much of what we deliver on campus, particularly in doctoral education, may best be accomplished in that research apprenticeship delivery mode. But perhaps with distance education we can do some things better than--rather than simply just as well as--we do on campus. There is not a simple "experiment" that involves pitting distance and on-campus education against one another to determine which is "better." The question basically is what is the best way to deliver different facets of an educational program. In many instances, the answer will likely involve a mixed combination of synchronous and asynchronous experiences for both on- and off-campus programs. Indeed, the Boyer Commission's recent report on *Reinventing Undergraduate Education* (1998) suggests that electronic communication techniques can be uniquely effective for courses that are typically taught in large lecture sections, thereby freeing faculty time for classes that integrally involve interaction with students.

By integrating the networked delivery of multimedia learning materials with

asynchronous and synchronous conversations between and among students and faculty, the new technology can enrich the learning environment and overcome some limitations of traditional classroom delivery. Asynchronous course delivery by electronic communication avoids the restrictions of fixed-schedule classes and enables both on-campus students and employed adults to fit access to course materials into their own schedules and to repeat exposure as needed. Some universities are extending their educational service beyond the local catchment area to global delivery. Others are forging consortial partnerships to cooperate in teaching degree programs that they do not have resources to deliver by themselves.

Already at many institutions both undergraduate and graduate students are retrieving course information on Web pages and using course "packets" on interactive CD-ROMs or enriched Web sites. Interaction with faculty and other students via e-mail is now becoming commonplace. With the increasing utilization of electronic communication for course support or entire course delivery, there is less distinction between on- and off-campus (or distance) coursework. Nevertheless, as noted earlier, on-campus students typically have more access to other learning facilities, resources, and venues and also, presumably, to richly-nuanced, face-to-face interactions and mentoring. It is a challenge for distance education to provide comparable enhancements to students' overall learning experiences.

The innovation opportunities of distributed learning involve both delivery and learning methodology. At present, technology appears to be driving many adaptations, and not many research faculty are involved in educational research and development. Educational objectives would be advanced if this trend were reversed and problems were formulated before a technological solution was sought and more funding were available to support the needed educational research. For example, how can courses be adapted to accommodate different learning styles? With mixed media, video lectures help those who learn best by listening; sophisticated graphics and other visual images help those who are more visually oriented; online text-based materials help those who process information best by reading; and hands-on virtual reality exercises can help students who learn best by doing.

Other research topics relating to the learning process include questions about the impact of online communication that is typically incorporated in technology-based distance education. Employers complain about the underdeveloped communication skills of both undergraduate and graduate degree recipients. Since distance courses often require more written communication for discussions as well as assignments, can writing skill be improved through feedback from faculty and other students regarding a student's e-mail and other written messages? Is the distribution of contributions to course discussions more balanced in an asynchronous format than in a classroom or chat room, where more dominant students often monopolize the discussion? If so, how does this affect measured learning outcomes? Similarly, do minority and international students whose native language is not English participate more in asynchronous communications, where they have more

time to formulate their messages and their accent is not heard? More research involving the convergence of telecommunications, computing, and the communication and cognitive sciences can significantly enhance educational processes.

The New Learning Paradigm. Currently much attention is being given to a so-called new learning paradigm. Some rather simple dichotomies are formulated to distinguish it from the "old" approach. For example, distinctions are drawn between learning that is "passive" versus "active", "faculty-centered" versus "student-centered" or "process-oriented" versus "outcome-oriented."

There is more than a kernel of truth in these dichotomies' implied indictment of much undergraduate education, as documented in the previously cited Boyer Commission report (1998). Graduate education, however, with its seminar structure and apprentice research training, has traditionally used much of the "new" learning paradigm. By design in a graduate program, there is active involvement of graduate students in the learning and discovery process. Ideally, faculty research guidance and mentoring promotes students' increasing self-direction as independent contributors or practitioners in their fields. And throughout this process, all eyes are on the prize of successful outcomes in completion of qualifying and comprehensive examinations as well as of theses, dissertations, and other scholarly or research products.

Overall, therefore, the design of graduate education incorporates many "new paradigm" attributes that enhance learning and development. On-campus graduate education typically is not "student-centered," however, in terms of accommodating place and time pressures that many students experience. By and large, students must work in synchrony with the academic calendar, course schedules, and time-to-degree expectations. In addition, as we shall note in discussing policy issues, graduate administration is not guiltless in its focus on process. The challenge as we incorporate technology-based education (both on campus and at a distance) is to consider the quality objectives rather than simply the past implementations of our policies and to assure that interactive learning experiences that are the hallmark of graduate education are integrated in the delivery.

THE NATURE OF GRADUATE EDUCATION AND THE ROLE OF GRADUATE ADMINISTRATION

As we have noted, there are compelling reasons in terms of service commitments, responsible use of human and physical resources, competitiveness, and university contribution to learning innovations for extending graduate education beyond campus borders. As we have also noted, however, by the very nature of distance education, an extended program cannot be identical to an on-campus program. What "equivalencies" are acceptable for a graduate course or program to be deemed a graduate experience? What is the role of graduate administration vis-à-vis distance graduate education?

What is Graduate Education?

As a starting point for considering these issues, there should be agreement about the core attributes of graduate education so that its essential elements are preserved regardless of delivery mode. According to CGS president, Jules LaPidus, "Graduate education has three major characteristics: it is advanced, focused, and scholarly" (LaPidus, 1989). The advanced attribute means that graduate education is built on a base of a baccalaureate education. The students thus are "advanced" in educational attainment, and so is the subject matter. In some fields where there is a discernible cumulative quality in the coursework, graduate admission requires prior completion of specific prerequisites (e.g., successful completion of specified science and math courses for graduate science programs). In other fields, such as a Master of Public Administration, successful completion of a liberal arts baccalaureate may suffice for admissions consideration, and the degree program builds on this background.

The Advanced Attribute. There are additional facets to the advanced nature of graduate education in addition to the curriculum and educational attainment of students. To be admitted as well as to maintain good standing in graduate study and to complete degree requirements, students must perform at an advanced level of excellence, as reflected in their undergraduate and graduate grade point averages and their performance on various qualifying, comprehensive, and dissertation examinations. In addition to the advanced educational attainment and performance of the students and the advanced nature of the coursework and other elements of the degree program, there is an advanced quality to the faculty who teach and mentor graduate students. Typically graduate faculty are distinguished by their advanced degrees, specialized knowledge, and active scholarly engagement as well as peer-reviewed contributions to their fields.

The Focused Attribute. In addition to being advanced, graduate education is "focused." Graduate programs typically focus on a discrete body of knowledge taught by faculty who are acknowledged specialists in various facets of the subject matter, and the student develops specialized expertise after demonstrating overall understanding of the field. Graduate education's focus on depth in an integrated program of study rather than on breadth over an array of areas distinguishes it from the American undergraduate experience, which typically emphasizes a broad liberal arts foundation.

Although, as noted earlier, the American undergraduate delivery model was adapted from the British, the American undergraduate curriculum differs from the European curriculum, which involves a more specialized preparation, typically for the professions, civil service, and other occupations. The main reason for this difference relates to the background preparation of undergraduates. In the traditional European model, stringently selected students (often from more privileged social classes) entered college with a background in liberal arts that was acquired in elite secondary schools (e.g., the English grammar schools, French lycees, German gymnasia, or Scottish high schools). With the increasing democratization of higher education over

the last century and a half, American undergraduates, on the other hand, come from diverse secondary schools that differ in curricular requirements and quality. Almost by default, therefore, American universities have concentrated on developing undergraduates' critical thinking ability and breadth in the liberal arts, along with some competency in a major field of study. By and large, as noted previously, this arrangement "works." Building on the broad-based baccalaureate, and providing advanced, in-depth focused study and research, many American graduate programs are acknowledged internationally as world leaders. This prestige emanates from the gestalt provided by adding the third critical element of graduate education involving scholarly activity.

The Scholarly Attribute. The "scholarly" aspect of graduate education means that graduate programs "are based on the premise of a generalizable evolving knowledge base, arrived at and agreed to by those in the field and subject to challenge and validation by generally accepted procedures. . . . Graduate programs are concerned not only with the transmission of knowledge, but with actual involvement in the processes by which knowledge is attained" (LaPidus, 1989, p. 3). The process of discovery, through research and scholarship, is a hallmark of graduate education. Usually, graduate degree completion requires an integrative, capstone scholarly experience such as a comprehensive examination, thesis, artistic presentation, or dissertation.

Apprenticing to become a discoverer and contributor to the advancement of knowledge is central to doctoral education. Master's programs, as well, often incorporate discovery opportunities. Regardless of whether thesis research is required, master's programs impart the methodology of discovery, preparing degree recipients to be, at minimum, intelligent and critical consumers of the research and scholarship in their fields.

Contextual Elements. In addition to its core advanced, focused, and scholarly attributes, the contextual elements of graduate education enable students to deepen their knowledge, extend their skills, and develop their intellectual maturity. A graduate program is an integrated, planned program of study designed and delivered by graduate faculty who possess appropriate advanced academic credentials, successful teaching and research experience, and recognition as contributors to their fields. The faculty and students together form a graduate community of scholars. Within this community, frequent interaction between faculty and students and among students in both structured and informal situations provides a venue for enhanced learning and discovery as well as for induction into the social system of the profession.

The cumulative learning experiences included in graduate education help train students to think clearly and critically; to explore, question, analyze, and synthesize the subject matter of their fields; to discover, conceptualize, and create new contributions; to challenge, defend, and debate as well as explain, clarify, and disseminate findings through both oral and written communication; to understand and follow the ethics of their field; and, where appropriate, to teach.

The Role of Graduate Administration

Within universities, graduate education is embedded in a governance structure that assures the quality of the graduate offerings by review and measurement of the achievement of stated educational objectives. As set forth in the CGS policy statement on the *Organization and Administration of Graduate Education* (1990), the role of the graduate unit (school) in an institution of higher education is to define and support excellence in graduate education and in the research and scholarly activities associated with it. Usually in collaboration with a graduate council, a graduate dean articulates a vision of excellence for the graduate community, defining good practice in graduate programs. The graduate council typically sets university-wide standards in areas like admission requirements, GPA minimum for good standing, general degree completion requirements, format of master's theses and doctoral dissertations, and faculty qualifications for teaching graduate courses, serving on or chairing dissertation committees (or for graduate faculty membership). The council also usually develops policies and procedures for reviewing students' academic progress, for dealing with student grievances, academic dishonesty, and appeals, and for reviewing proposals to establish, modify, or discontinue graduate degree programs.

Ideally, these generic visioning and oversight activities apply to all graduate programs of an institution, regardless of where and how they are delivered. Inasmuch as every graduate degree bears the imprimatur of the institution awarding it, accountability demands that the quality of the degree be assured and remain constant regardless of its delivery mode. Consonant with CGS's endorsement of a centralized graduate university office (1990), in our judgment the organizational structure of a university-wide graduate unit best accomplishes the institutional review and quality oversight needed for this assurance. Nevertheless, in some institutions the purview of the graduate dean and graduate council does not include professional degree programs (e.g., M.B.A.s) or "continuing education" degrees (which may bear the same titles as those offered within a university's schools and colleges). In these instances, it behooves an institution to ascertain that appropriate equivalent quality assurance is provided even though it may, perforce, lack the institution-wide academic perspective afforded by the graduate council structure.

DISTANCE GRADUATE EDUCATION POLICIES AND PRACTICES

In keeping with their obligations to society, universities must set and maintain standards of excellence in all of their educational endeavors. There must be quality assurance for all activities involved in transmitting, assessing, discovering, and jointly creating knowledge; in intellectually nurturing, evaluating, and socially integrating students; and in selecting, supporting, and reviewing scholars. Although, as noted previously, continuing education has long been an important part of many universities' portfolios, the relationship between these activities and the institution's "day job" often is

disconnected. As far as some academic units are concerned, external learning is peripheral, with evening and summer offerings marketed to a large extent for the economic benefit of the department and frequently taught by adjuncts or "less successful" (those not active in research) faculty to augment their take-home pay. A first question for a department proposing to offer a distance graduate program, therefore, concerns its intent: Are the faculty committed to delivering and maintaining a high quality graduate experience, or are they "peripheralizing" this program in response to favorable market forces or administrative pressures to increase enrollments?

General Guidelines for Assuring Quality and Demonstrating Equivalency

An institution's decision about whether or not to offer or continue a graduate distance education program should be based primarily on its mission and goals, on the academic quality of the offering, and on the demand for the program. The following guidelines, which incorporate suggestions from previous CGS distance education publications, provide important considerations in this regard.

1. The offering of distance education programs should be consistent with an institution's mission and goals (which may be revised to encompass distance education initiatives). Considerations may include serving the educational needs of time- and place-bound learners at a statewide, national, or international level or serving a specific employee or professional population.

2. Before deciding to offer a distance graduate program, an institution should engage in strategic planning to assure its quality and viability. Considerations include a) the program's academic content and its academic, administrative, and financial impact; b) the target student market; c) faculty interest, qualifications for this type of instruction, availability, and ongoing commitment; d) the availability or cost of appropriate learning resources and student support services; e) and the program's fiscal viability, including up front and operating costs and tuition pricing.

3. Distance graduate degree programs should be offered only in areas where an institution already has substantial academic strength and scholarly resources to support the program or has guaranteed that it can provide appropriate strength through partnerships, consortia, or joint degree programs.

4. Distance graduate education programs should be offered only when an institution has sufficiently robust systems and appropriately trained technical and support personnel to ensure quality delivery and connectivity among faculty and students.

5. Since they bear the imprimatur of the institution, all degrees (and university-awarded graduate certificates) must represent the same level of excellence regardless of the delivery mode. Graduate programs that are offered in both an on-campus and distance delivery mode should be equivalent in academic content and objectives, faculty and student quality,

evaluation standards, and learning outcomes. Distance graduate programs that do not have an on-campus counterpart should meet accepted graduate level education standards and result in learning outcomes appropriate to the rigor and breadth of the degree or certificate awarded.

6. Proposals for graduate distance education offerings should be reviewed through the institution's existing academic governance processes, including review and oversight by the graduate dean. As appropriate, they should also be reviewed and approved by university system, state, and regional or specialized accreditation organizations (see Council for Higher Education Accreditation, 1998 for an accreditation policy agenda). Quality evaluation standards should be equally stringent as those for review of on-campus proposals. The content, format, pedagogical methods, learning resources and support services should be reviewed in terms of their accomplishing specified goals and learning outcomes.

7. For technologically-based distance programs, the viability of the proposed delivery mode and the availability of appropriate support personnel should be ascertained—for example, through review by a computer, telecommunications, or distributed learning center. In addition, course multimedia (e.g., text, audio, video, graphics) should be reviewed to assure that they do not violate copyright or intellectual property laws.

8. Both distance and on-campus graduate programs should be offered through existing academic units or interdisciplinary programs and should be overseen by qualified faculty and graduate governance bodies. It is desirable that a specific program coordinator be identified for distance programs to act as a focal point for dealing with programmatic and delivery issues.

9. Overall criteria for admission, good standing, and degree completion should be the same for distance and on-campus graduate programs. Ideally, the same individuals or committees should handle reviews of performance on these criteria for both distance and on-campus programs.

10. Whenever possible, distance programs should be taught by regular, full-time faculty, preferably as part of their assigned teaching load. If adjunct faculty are used, their qualifications for graduate teaching should be ascertained and they should receive appropriate orientation about program practices and expectations.

11. All distance education course instructors must be qualified to teach in a distance delivery mode, and they should receive appropriate orientation, training, and technical support.

12. Established graduate distance programs should be reviewed with the same general procedures and on the same schedule used for on-campus programs, with oversight by the graduate dean.

Issues Involving Generic Institutional Policies, Practices, and Agreements

Like any change from customary activity, proposals for distance graduate programs provide opportunity for universities not only to review the quality and counterpart equivalency of the intended offerings, but also to scrutinize established policies and procedures. As a result of revisiting underlying rationales, particularly in terms of the current educational context, existing policies and practices may be reaffirmed, fine tuned or significantly modified, discontinued or replaced.

Adaptations in many specific practices will probably need to be implemented for graduate degree programs offered in a distance education mode. Some may be accomplished relatively easily--for example, accommodating more electronic communication and data transfer than is customary for on-campus programs. Others, such as providing student services and communicating with students, may require considerable effort and perhaps additional, differently trained personnel.

The Time Dimension. Some time-honored (or timeworn?) traditions in academic institutions can be dysfunctional for effective distance delivery of education to large numbers of potential students. One reason for the burgeoning success of corporate and for-profit educational providers is that they are client-centered and design anyplace/anytime programs to accommodate adult learners' place and time constraints.

The Academic Calendar. Much of the rhythm of campus life is set by the academic calendar. In synchrony with this calendar, on-campus constituents generally adapt to the start-up and phase-down of both academic and governance activities. While many graduate programs are "year-round," required courses usually are offered only at set times during the September to May or June "academic year." and summers are preponderantly devoted to practica, internships or research activities.

The scheduling involved in the academic calendar is based on a traditional pedagogical model which assumes that students' backgrounds, abilities, learning styles, and educational goals are sufficiently comparable so that most should be able to progress at the same rate through preset scheduled activities (cf. Twigg, 1997). The variance in time-to-degree measures, for example, challenges the validity of these assumptions.

As noted in the previous discussion concerning the new learners, the academic calendar is an impediment to the goals of many potential part-time graduate students. To fulfill employer needs or advance professionally, employed adults often have immediate need for the knowledge and skills embodied in a particular course or program. They cannot wait until next semester or next year when the course is scheduled to be taught, and many cannot be available consistently at set hours for instructional presentations that are paced over an academic term or several academic years.

More learners thus are seeking a different place as well as pace of learning–at their workplaces or homes for a few hours per week or for an

intense period over a weekend. Their competing obligations and lifestyle preferences preclude their fulfilling the traditional expectation that "motivated" graduate students should "go" to graduate school and immerse themselves in full-time study and research until they "finish" their education.

Since the typical protracted and wrenching "calendar" debate at many universities is limited to deciding on a change from quarter terms to semesters or vice versa, the challenge of accommodating self-paced learning can be daunting. Issues relating to prerequisites and course sequencing, for example, are not easily resolved. Nevertheless, in this new learning age, the design of the academic calendar and the scheduling of courses need thoughtful consideration and decision-making.

At this time, many universities continue to do business as usual with their on-campus schedules and calendar, and they deliver some distance programs "off-calendar" in compressed timeframes or in other ways to adapt to learner needs. This arrangement may be workable during this transition period; however, as more on-campus coursework becomes technologically-based and as distinctions between on-campus and distance programs become blurred, the "calendar issue" will need to be addressed.

Credit Hours. Many universities, state regulatory bodies and accreditation associations have regulations that measure course credit (and faculty workload) in terms of hours of classroom instruction and that require one calendar week for each semester hour of course credit. Unless exceptions are granted, these regulations preclude compressed timeframe course delivery both on and off campus. In addition, in self-paced, asynchronous course delivery, the mapping of credits onto "seat time" is not meaningful.

The rationale for these time measures is that learning "takes time," including time for completing and reflecting on both in- and out-of-class assignments. Whether there ever was an empirical basis for the prescribed amount of time presumably needed for learning, the inflexibility of the measures involves implicit assumptions that all learners learn at the same pace and all learning takes the same amount of time. In using these "process" time measures as a surrogate indicator of learning, some bureaucrats, who become fit in their regulatory roles with an unfit fitness, tend to reify the indicator and ignore the outcome goal. As demonstrated in some CGS listserv discussions of graduate school regulations regarding contact hours, graduate deans and councils need to guard against this behavior.

Rather than let timeworn assumptions and practices impede educational innovation, educational policy-makers in universities, state agencies, and accreditation organizations need to revisit the seat-time and credit-hour and the one week per credit hour rationales. Educational activities on campus as well as in a distance mode will benefit if course credit is redefined in terms of well-formulated learning objectives whose achievement is assessed and documented by validated measurement procedures. Implementing this recommendation to change the standard currency in higher education from the Carnegie credit to competency

demonstration will require additional educational research to develop appropriate measurements. As always, appropriate review and oversight are needed to assure quality in course design and measurement procedures.

Time Limits for Degrees and Courses. Traditionally, universities impose maximum limits on the time to earn a degree to assure currency of the knowledge being certified. The same rationale underlies maximum limits on completion of coursework before an Incomplete grade reverts to a failing grade. As many graduate schools will attest, on-campus, part-time students often cannot meet these limits and petition for extensions. The same situation will likely occur with part-time students in distance programs, particularly where there is asynchronous delivery.

While some learners' life circumstances might occasion an extension in the preset maximum time for course or degree completion, other learners participating in asynchronous or in compressed timeframe delivery might "speed up" their completion. Given valid concern about students' opportunity for scholarly reflection and subject matter analysis and synthesis, some deans have suggested that minimum, as well as maximum, limits be imposed for course and degree completion. Again, this use of time as a surrogate measure for learning implicitly assumes (without substantiating evidence) that all learning requires the same specified quantity of time and that all students learn at the same pace.

Vis-à-vis program and course completion time, we recommend that graduate program policy-makers reconsider the rationale and necessity for imposing maximum and minimum time limits. Rather than assume that a specified maximum time, itself, is a valid surrogate measure of the currency of every student's knowledge and skills, and rather than assume that a specified minimum time, itself, is a valid surrogate measure of every student's learning, it is more defensible to directly measure a student's actual achievement of intended, specified outcome knowledge, competencies, and skills, regardless of when these were acquired. Programs may develop different measurement procedures (e.g., a special oral examination, or variations on qualifying or comprehensive examinations) for this purpose. With this change in policy, graduate schools can monitor completion times to ascertain the average and range for different programs. This information can be useful in program review and in providing useful data to applicants.

Residency Requirement. Residency dictates many of the rhythms of graduate education; and many, if not most, U.S. and Canadian universities have residency requirements for graduate programs. Residency implies an intense experience in an environment that supports and encourages formal and informal scholarly interaction among faculty and students as well as access to other on-campus learning resources (libraries, labs, colloquia, visiting scholars, etc.).

As described earlier, the research apprenticeship model that is inherent particularly in U.S. doctoral education necessitates a high frequency of face-to-face scholarly interaction. The residency requirement thus is compatible with this model. Traditionally, European and

Asian universities have not required residency and have not used a research apprentice model. Indeed, in some instances in these institutions, the only requirement for the doctorate involves independently completing an approved research project, submitting a dissertation and passing an oral examination.

Given the demonstrated success of the apprenticeship model in which thoughtful scholarly discourse and meaningful collaboration often generate new knowledge, it is unlikely that faculty of American graduate programs would want to change this educational practice. It remains to be seen whether the intense scholarly interaction involved in apprentice research training can be accomplished without some type of sustained residency experience.

Residency Objectives. As operationalized in terms of full-time, on-campus enrollment for a specified period of time, the traditional definition of residency implicitly assumes but does not in fact measure the core experience that residency is intended to provide. It is well known that some students "fulfill" the letter but not the spirit of residency requirements by registering for the requisite hours and academic terms but appearing on campus only for required class meetings (or perhaps not at all if they are doing independent study). In these instances students do not experience the interactions with faculty, other students, and campus learning resources that the residency requirement is intended to facilitate.

Acknowledging that the residency requirement per se does not guarantee scholarly interaction and exposure to the many facets of the enriched campus environment, it is nevertheless a convenient means to provide opportunity for this kind of experience. Some distance education programs, such as those offered by Walden University, therefore incorporate a required and monitored on-campus residency experience in their program design.

In what ways and to what extent can residency objectives be accomplished outside of a campus setting? Some useful guidelines have been developed by Pennsylvania State University (1997) in association with their residency policy for off-campus graduate programs (available through the "residency requirement" link at <http://www.gradsch.psu.edu/policies/offcampus.shtml>). Some of these suggestions are incorporated in the subsequent discussion of the process of delivering distance programs, which includes examples of ways of facilitating interaction between and among students and faculty and of providing access to other learning experiences.

The demonstrated success of many distance programs that use these methods suggests that at least in these cases a high quality graduate program can be delivered without an actual residency experience. Given the positive outcomes of long-standing distance master's programs in engineering and business, it may be easier to accomplish residency objectives in distance programs involving professional master's degrees than in arts and science programs; however, that has yet to be demonstrated.

At this time, it seems advisable for Graduate Deans and Councils to revisit

their residency policy. They may conclude that a blanket requirement for all graduate programs is not appropriate. Instead, specifying the objectives of residency and judging the adequacy of proposed means to achieve them (in both an on-campus resident and a distance mode) might better serve individual graduate programs' educational goals. As a result of this process, actual residency, with at least some specified learning activities, might be a requirement for some programs but not for others. Whether or not residency is required, we recommend that graduate schools develop evaluation procedures for assessing accomplishment of residency learning objectives.

Faculty (and Future Faculty) Issues

Distance education raises many issues for and about faculty. Some of these relate to faculty teaching qualifications, others concern faculty role, workload, and compensation.

Training for Distance Teaching. Unlike the traditional off-campus program that involves essentially the same teaching methodology as an on-campus delivery, technology-based courses require special training to be effective. In reviewing graduate distance education proposals, therefore, graduate deans and councils should ascertain that distance-delivered courses are taught by faculty with appropriate training as well as other qualifications. Unfortunately, when they review faculty for graduate faculty status, or its equivalent, some graduate schools focus mainly on scholarship, research and publications and do not require demonstrated excellence in teaching. Perhaps this deficiency will be corrected for all reviews as a result of the imperatives of some types of distance delivery.

Good preparation for distance teaching involves interaction with experts in learning, communication and use of technologies. Given the proliferation of technology-based distance education, graduate programs are well advised to incorporate this kind of training in their preparation of future faculty. In response to demands for better undergraduate teaching, many graduate schools are revising their graduate teaching assistant training and are adopting models generated by the Preparing Future Faculty (PFF) program, which is jointly sponsored by the Council of Graduate Schools and the Association of American Colleges and Universities with funding from the Pew Charitable Trusts <http://www.preparing-faculty.org/>. To prepare students for the realities of their future faculty roles, the PFF model typically includes training with new pedagogies and delivery systems, as well as information about student expectations and faculty roles in diverse 2- and 4-year educational institutions. Our recommendation about training for distance teaching thus amplifies one aspect of the general PFF model for responsible and realistic preparation of future faculty.

Although specific components will vary according to the type of distance delivery, training of faculty and future faculty should include information about learning styles and needs of adult learners, particularly those in the target population. Other useful training relates to the creation of customized web-enhanced or web-based courses, with web pages for interactive multimedia, texts and for forms to create and grade

responses on-line. Additional training components might include hands-on experience with the technologies; best practices for on-line lectures; electronic communication strategies–including synchronous virtual classrooms and meeting places and asynchronous group communications (e.g., through limited listservs, web chat boxes and e-mail); and ways of dealing with security and academic honesty concerns and use of encryption programs. In addition to initial orientation and training, faculty can enhance their distance teaching through ongoing access to an instructional resources unit, with "just in time" support from technology experts and through regular interaction with peer mentors among other faculty involved in distance education. Useful suggestions for distance education faculty training are provided by the Instructional Telecommunications Council (1998).

The Changing Faculty Role. Many faculty evince concern about their roles in distance education. Typically in on-campus and traditional off-campus delivery, faculty members design their courses in keeping with overall program and departmental objectives. They choose and present information for in-class delivery; they select reading, lab or other assignments; and they prepare and grade examinations. In some distance education applications, these "faculty" tasks are unbundled so that different individuals or teams accomplish some or all of these activities. For example, to maintain consistency in course content and facilitate quality assurance, the University of Phoenix uses a standardized curriculum developed by subject matter experts (Noon, 1997). In addition to outsourcing course design to a team comprised of subject matter and technology experts who specify learning objectives, content and delivery methods, an individual professor's classroom presentations could also be replaced. Instead of the faculty member's lectures, there could be multimedia materials, including CD-ROMs and World Wide Web sites with various graphics and three-dimensional models as well as video recordings of lectures or performances by internationally-recognized scholars and artists (cf. Young, 1997). Some or all assessment tasks also could be outsourced by selecting tests from databases developed by experts and by having the tests administered and graded by outside examiners. Third-party evaluations are commonplace in European universities where external examiners conduct qualifying orals, and they are also used, for example, in U.S. post-baccalaureate professional education to certify competency to practice accounting, law, and medicine. While many graduate schools or programs require outside examiners on dissertation committees, evaluation control remains with the program faculty.

With imported classroom presentations, a professor's teaching portfolio could involve leading focused discussions, explaining and amplifying course topics, and generally acting as a content expert and "learning facilitator" in helping students analyze and synthesize information and in stimulating their integration of information into knowledge in order to achieve specified learning objectives. This teaching responsibility, which is similar to seminar leadership, can be far more demanding than the traditional lecture delivery. Needless to say, however, not

all professors welcome the possibility of transforming their role from being the "sage on the stage" to becoming the "guide on the side" (Young, 1997).

Disaggregation of course responsibilities presents exciting enrichment possibilities; however, each element, as well as the gestalt, requires careful development and assessment to assure the quality and appropriate oversight of the learning experience and learning outcomes. Actually, this division of labor for curriculum delivery can be implemented for on-campus as well as distance programs; hence it is not distance education per se that occasions these controversial possible changes in faculty responsibilities and course delivery. In any event, this is not an either-or situation. Examining discrete elements in curriculum design and in delivery of courses both on campus and at a distance can help educators select an enriched, customized combination of content material. Presentations by famous scholars can augment faculty lectures, and diverse delivery mechanisms and well-validated evaluation procedures can enhance the learning experience and the measurement of learning accomplishments. Very likely, however, outsourcing of some curricular responsibilities may be more feasible and useful in introductory, survey courses than in advanced seminars where faculty-student scholarly interaction usually is more dynamic and is part of the evaluation of student learning.

It seems inevitable that faculty roles will change as new learning paradigms, new educational resources and new modes of educational delivery are adopted. Perhaps in their teaching functions, more faculty will become specialists in specific aspects of curriculum design or assessment. It remains to be seen whether some faculty fears will be realized, and fewer faculty will be hired--particularly in full-time, tenure-track positions--if institutions engage in more distance delivery and purchase courses from "master teachers" from elite institutions.

Faculty Recognition, Compensation, and Workload. In addition to their concerns about professors' roles and the impact of distance education on faculty size, many faculty are dubious about incentives and rewards for distance education activity. Since, as already noted, distance delivery requires special training, many faculty are unwilling to expend the extra time and effort that might otherwise be devoted to research activity. For the same reason, they are reluctant to teach distance courses "off-load," even though extra compensation is provided. In most U.S. graduate programs, research activity and funding as well as peer-reviewed publications garner more recognition and reward than curricular contributions and teaching success. Despite exhortations in many national reports about giving more emphasis to teaching in criteria for university recognition and advancement, change is at best slow, and the status quo may impede pedagogic innovation at all levels of higher education.

As stated previously, departments should be committed to standards of excellence in all of their educational programs. It is thus desirable for quality assurance to have distance as well as on-campus graduate instruction delivered by regular, research-active program faculty.

To encourage this participation, it is good practice to give faculty release time from teaching for distance education training, to provide development grants for course preparation, to incorporate distance courses into faculty members' regular teaching loads and to recognize and reward teaching innovations and demonstrated teaching effectiveness. As an incentive to departments, it is also good practice to share funds generated by distance programs.

Along with issues of time commitment and compensation for distance courses that a faculty member teaches "off-load," faculty may encounter other workload concerns related to distance courses. For example, in distance (or on-campus) courses where lectures are imported and the professor's role is concentrated on learning facilitation and evaluation of students' achievements, will course enrollments be increased to change the faculty-student ratio substantially? This concern is amplified by the fact that even in teaching on-campus courses, professors are finding increased workload demands from the volume of e-mail from students. Reports from faculty and students suggest that student-faculty communication is even greater in distance education, raising the question of where the faculty are going to get the additional time (and compensation?) to respond to all of their e-mail.

Other faculty concerns relate to compensation for the university's re-use of a videotaped lecture course previously produced by a faculty member, and to time credit if the faculty member does the student evaluation for the re-used course. While universities' existing policies on ownership and licensing of intellectual property might readily apply to this situation, the policies may, nevertheless, need some modification and updating.

Intellectual Property Rights.
Designing a web-based course often involves considerable institutional subvention and thus is not necessarily the same as writing a textbook. The development of distance courseware may involve university investment in terms of reassigned faculty time and development grants, substantial use of university facilities, computing and telecommunications equipment and software, as well as technological assistants and instructional support personnel. Under these conditions, universities' policies usually assign ownership of the product to the university.

Although universities' existing intellectual property policies--including policies on copyrights, patents, licenses and royalty distributions--are likely to accommodate situations encountered in distance education and to apply equally well to electronic media and products, it is also likely that the policies need some modification or amplification to facilitate understanding of individual and institutional rights. Questions will inevitably arise regarding the ownership of and the rights to re-use, modify, package, market and sell software, videotapes, graphics, web sites or whole courses developed with university support. As in other situations, it is a best practice for faculty and appropriate administrators to negotiate in terms of university policy and to write and sign agreements up front, before development of web tools and distance course materials begins. In reconsidering their

policies, institutions may wish to adapt the sample agreements contained in the University of Illinois intellectual property policy found at <http:www.vpaa.uillinois.edu/policies/courseware.htm>.

Conflicts of Interest and Commitment. With the increasing demand for distance post-baccalaureate education and with the current relative paucity of faculty trained to deliver these courses, it is likely that faculty with these skills will be sought by other institutions for permanent or short-term appointment. In reviewing faculty proposals to teach a distance course for another provider, universities may deem it a conflict of interest for its faculty to deliver essentially the same university course for a competitor. Moreover, universities may also evince concerns about the time commitments of faculty whom they employ full time.

Generally, these situations can be dealt with in terms of existing university policies relating to conflict of interest and to conflict of commitment, and it is unlikely that substantive change will be needed to cover the distance teaching outside employment proposal. Given the likely increase in such opportunities, however, it behooves institutions to make sure that their policies are disseminated and discussed. Without appropriate reporting, a full-time faculty member at one university might receive supplementary compensation for teaching a web-based course for another provider, with the home institution unknowingly underwriting the real cost of employing the faculty member.

Organizational Issues in Distance Education

Distance education often entails a different scale of operations involving collaboration between organizational entities that may not have worked together before, both within and outside of the university. Graduate faculty and administrators may need to collaborate in new ways with continuing education or distributed learning centers and with computer, network, media, and telecommunication experts. To deliver distance programs, universities may develop partnerships with publishers, telecommunications companies and other corporations that have distribution channels. In addition, universities may form consortia with other institutions to provide more students access to more faculty, to more diverse subject matter and to expanded learning and support resources. Individual academic units may also develop joint distance degree programs with colleagues at other universities.

University Consortia. As noted previously, in some university consortia each participant retains its own degree-granting authority and operates in parallel with other institutions under the umbrella of a facilitative organization that helps students access information on available offerings and institutional admissions procedures. In this kind of arrangement, each institution typically sets and receives its own tuition and contributes to organizational expenses. This structure, moreover, requires relatively few inter-institutional cooperative agreements concerning staffing and student issues. Agreements about programming might include articulation arrangements whereby courses from partner institutions can readily be accepted as part of a university's degree program.

In other consortia, degree-granting authority for graduate programs that combine course offerings from individual members is vested in the organizing entity. In this situation, participating institutions need to agree on admissions and course completion standards, on the logistics of coordinating course offerings, staffing, and advising, and on fees and finance.

In addition to institutional consortia that offer degree programs from individual members of the consortium, other consortia focus on sharing scarce instructional resources that can contribute to members' academic programs. For example, the Committee on Institutional Cooperation (CIC), which includes (eleven) "Big Ten" schools plus the University of Chicago, has provided some of the support for political science departments in four of its member institutions (Illinois, Minnesota, Ohio State, and Wisconsin) to share advanced data analysis seminars via interactive television. Few departments can afford to offer all of the selected courses regularly; thus coordinating and sharing enhances all participants' graduate programming.

Extending this concept, CIC is planning a CIC Common Market of Courses and Institutes, with infrequently-taught foreign language courses an initial target for offering through distance technology to graduate degree candidates at all members institutions. A program fee will be assessed for cost recovery; however, since students will continue paying tuition at their home campuses, the problem of coordinating tuition charges across public and private institutions is avoided.

Still another inter-institutional collaboration for sharing graduate-level instructional resource involves the University of Minnesota-University of Wisconsin Regional Collaboration Program. The collaborative framework and detailed delineation of administrative roles and responsibilities for the distance education initiatives provide useful models for possible adaptation by others planning this kind of cooperative activity (contact jperry@forestry.umn.edu and ibarra@macc.wisc.edu).

Joint Graduate Degrees. Joint degrees represent still another type of inter-institutional cooperation in distance delivery of graduate education. While the impetus for this collaboration usually comes from faculty colleagues in the corresponding departments in each institution, it is the graduate administration in each university that usually assumes responsibility for actually brokering the joint degree agreement, including budgeting, fee, and tuition issues.

Reviewing the proposed joint degree requires action by graduate deans, graduate councils and other relevant governance bodies and administrators in each institution, as well as by any necessary external system, state or accrediting organizations. Agreeing on matters of admission and degree completion standards and criteria for graduate faculty status may or may not require negotiations. Where institutions' or departments' standards differ, the higher standards should be adopted. Written cooperative agreements are needed, as well, for various programmatic and logistical issues

including sharing student advising and mentoring responsibilities, coordinating staffing and course offerings, sharing responsibilities for developing and evaluating any required qualifying, comprehensive or dissertation examinations and for serving on thesis and dissertation committees.

Issues Involving Graduate Policies and Procedures

A guiding principle underscored in all CGS policy statements on distance education is that regardless of how or where an institution's graduate degree is delivered, it is *essentially* the same high-quality degree that accomplishes the same educational objectives. Accepting that as a working premise, graduate deans and graduate councils need to make judgments comparing a distance degree program to its on-campus counterpart or to the typical high-quality counterpart elsewhere in terms of inputs, processes and outcomes.

Distance Education Inputs. Through its administrative and governance structure for graduate education, a university should ensure that its distance graduate programs are equivalent to its on-campus or peer counterparts in terms of overall review processes, programmatic design, admission and degree completion requirements and faculty qualifications.

Generic Graduate Policies and Procedures. Overall, the following generic graduate policies and general procedures relating to programmatic design and student monitoring are likely to apply equally well to on-campus and distance-delivered programs without major substantive changes:

Minimum Requirements for Certificates and Degrees
GPA and Qualifying or Comprehensive Examination Requirements
Review and Monitoring of Student Progress
Record Maintenance and Review
Format of Thesis and Dissertation
Academic Integrity Policies
Judicial Procedures
Grievance Policies and Procedures

Among the other policies and practices that may require modification to accommodate distance education delivery are the following:

a) Review of Proposals to Establish or Modify Distance Programs

Overall program review policies may well be changed or amplified to take account of issues raised in this publication. In addition, as previously noted in the general guidelines, the viability of the delivery mode of technologically-based distance programs should be certified through expert review by a computer, telecommunications or distributed learning center, and potential copyright issues should be examined.

b) Minimum Standards for Admission

While general minimum admission standards should be the same for all graduate programs, distance programs that are technologically based also need to require that students possess basic computer literacy skills. In addition, students need access to appropriate equipment and software

necessary to complete program requirements. For students lacking entry competencies for electronic courses (such as computing fundamentals, Internet access and use, and distance communication techniques), the institution may offer appropriate instruction or refer students to other sources for training. Similarly, for students lacking necessary equipment and software, the institution may provide appropriate access or refer students to other sources.

c) Evaluation of Proposed Transfer Credit

Like faculty instructional qualifications, the evaluation of previously-earned graduate credit is another issue that distance delivery highlights but that has application in the on-campus context as well. As noted previously, there are many modes of distance delivery, and some entail minimal instructor-student interaction and virtually no student-student interaction. Some graduate schools have a policy that automatically prohibits transfer credit for correspondence courses--a policy that focuses on educational process to the exclusion of considerations of the equivalency of learning outcomes achieved in different ways. The apparent underlying rationale for this policy suggests that some distance education courses would also automatically be excluded from transfer credit consideration--for example, a course delivered by video cassette with student papers and examinations mailed in for instructor evaluation.

Using course process as a determinant threshold for considering a course a graduate experience implies that some (unspecified) level of faculty-student and, perhaps, student-student interaction is the *sine qua non*. If this is the case, then to be consistent, should not the actual levels of interaction be ascertained rather than assumed before granting transfer credit for coursework completed at another campus (or, for that matter, before granting graduate credit for on-campus coursework)?

As we know, not all instructors engage in classroom dialogue and not all are accessible or forthcoming during scheduled office hours. Even where student input is encouraged, there is tremendous variation in participation; moreover, not all courses make provision for student-student interaction. While most graduate faculty probably would agree that scholarly interaction is a necessary component of a graduate degree *program*, it does not necessarily follow that all courses that are included in the program must involve faculty-student interaction beyond evaluative feedback. Seminars obviously require this interaction, but some courses focused on specific skill development may not.

We thus recommend that in evaluating proposed transfer credits, graduate schools and faculty be mindful of the implicit assumptions they are making and not get hung up on simplistic prescriptions about delivery process to the exclusion of learning objectives and outcomes. Evaluators need to consider both the explicit learning content of a course, in whatever

delivery mode it was offered (on-campus or distance), the evaluation procedures, and the student's measurable outcome competencies to assess comparability with these aspects of the university's own curricular offerings. This recommendation, of course, presupposes good practice in all course design, including a clear statement of educational objectives, of learning experiences to accomplish these objectives and of evaluation procedures to measure student achievement of these objectives.

d) Distance Education Processes

While many graduate program processes apply equally well to distance as to on-campus education, others may require modification.

Program Design and Delivery. The earlier discussion of graduate education delineated some core attributes of programs that are deemed graduate experiences, be they on campus or online. Incorporating these attributes, a quality distance graduate program provides ready access to learning experiences and necessary information, facilities and services; includes a clear statement of learning objectives and tasks; provides opportunities for scholarly interaction; and utilizes a clear assessment process to ensure accomplishment of learning outcomes.

In designing online courses, explicit plans usually are necessary to provide access not only to classroom experiences, but also to class materials and resources and to opportunities for interaction and collaboration. Web-based modules can be designed to operate as independent segments, or they can be combined into a whole course (see <http://info.med.yale.edu/caim/manual/contents.html> for a useful manual for web page design). A web-based course can include links to the class syllabus and to online readings and databases, with an explanation of appropriate uses of the information and uses that would infringe on copyright. Web pages also can link to bulletin boards, to interactive multimedia texts and other materials that are helpful to students with different learning styles and to real-time conversation sessions. With increased availability of the appropriate hardware, future course participants will even be able to see each other in small, real-time TV-like windows right on their computer screens (Gurak, 1997).

To facilitate communications in distance education courses, clear information is needed about scheduled discussions and about who is able to interact with whom and in what manner. For this purpose, some designers provide interaction grids that describe how and when learners can assemble for different course-related activities. This planning necessity might seem to distinguish distance from on-campus delivery, where live classrooms sometimes resemble loosely structured anarchies in terms of the pace and distribution of commentary. However, virtual classroom spaces, real-time chat rooms, or MOOs (Multi-user Domains, Object Oriented), where faculty and students can converse synchronously across the limits of distance and space, can have similar characteristics. (For more information on MOOs, which are constellations of spaces, or "rooms," within which online users can interact and move from room to room via "teleporting," see

<http:www.itp.berkeley.edu/~thorne/MOO.html>).

In addition to synchronous group discussions through online virtual meeting places or desktop videoconferencing connections, many distance courses include asynchronous group communications, for example through e-mail and posted comments on limited listservs. Indeed, with the increased availability of e-mail, on-campus as well as distance students are finding that they are engaging in more frequent communication and getting to know their professors and fellow students better than in the typical situation where they are trying to coordinate almost impossibly busy schedules. As already noted, this blessing also entails increased workload for faculty in reading and responding to their burgeoning e-mail.

Collaborative Work Groups. In many disciplines, traditional graduate program design emphasizes individual work or performance to the exclusion of the teamwork that characterizes work in many non-academic settings. To meet increasing requests by employers and recommendations by policy-makers (cf. Committee on Science, Engineering, and Public Policy, 1995), more graduate programs are incorporating collaborative student projects. Team projects enable students to pool their background knowledge and skills, to learn how to divide project tasks and to offer constructive critiques of others' work. In distance programs, audioconferencing can connect students at different sites for real-time collaborative activity. Similarly, computer conference systems can connect and support both real- and delayed-time group collaboration on projects and class presentations.

Testing and Evaluation. Preserving academic integrity is a challenge in all educational delivery. Both on and off campus, special effort is required to ensure that the student who gets credit is, in fact, the one who completed the work. In on-campus or distance graduate courses where there is considerable faculty-student interaction, the faculty have experience with students' discussion inputs and styles and thus have a basis for judging whether a student is likely to have produced a paper or exam. Many distance programs use testing centers located on campus or at selected sites. Others engage test proctors such as faculty at other institutions, administrative personnel who are available at convenient locations or supervisors or program coordinators at an employee's workplace. Concerted effort by academic and professional staff is required to assure security.

Faculty-Student Interaction Beyond Direct Course Instruction. As noted in the previous discussion of residency requirements, out-of-class interaction helps socialize graduate students into the culture of the graduate community and the profession, and it facilitates their contributions in these milieux. In the on-campus setting, advising and mentoring sessions as well as joint participation in formal and informal events enable faculty and students to share ideas and experiences. As indicated in the following discussion, there are ways to realize residency-type objectives in a distance delivery.

Mentoring. Mentoring is not synonymous with advising, although it includes advisory communication. Mentoring involves role modeling, advice and counsel on a range of academic and professional issues, and intensive constructive dialogue. On campus, mentoring relationships customarily develop through relatively frequent face-to-face interaction in formal and informal meetings. For students who complete theses and dissertations while away from campus, mentoring at that stage of their graduate careers typically involves phone conversations and communication via e-mail, fax or regular mail; however, these contacts usually are built on familiarity developed in face-to-face interactions.

In distance education, video-based office hours and the "C U See-me" technology can be useful in adding the nuances of visual cues to aural or written communications. At this point, however, it is an empirical question to what extent the learning benefits of mentoring can be realized or successfully approximated without actual face-to-face interaction. Particularly for doctoral programs, a combination of distance learning and face-to-face faculty-student interaction might prove to be optimal. For example, program delivery might include a research apprenticeship involving sustained, face-to-face faculty-student interaction.

Open Discussions. Discussions of professional issues and topics beyond specific course content can be conducted either one-on-one or with all course participants in a real-time "chat" area online or as a "threaded" (topic-specific) discussion via a computer conference or electronic bulletin board. Discussions can also be conducted via audioconference or structured as additions to videoconferences.

Student-Student Interaction. Students' learning is enhanced by sharing their diverse social and educational experiences in structured and informal settings, by collaborating in coursework and research, and by sharing in special scholarly events. As noted previously, it is possible to incorporate group or team projects in distance coursework.

Cohort Groups and Peer Counseling. In the on-campus setting, cohorts of graduate students often form study groups to facilitate their academic progress, prepare for qualifying and comprehensive exams, and provide social support and camaraderie. In addition, advanced graduate students usually offer encouragement and advice to less experienced peers on academic, administrative, and general graduate student and professional concerns. Some of the benefits of this sharing can be incorporated in distance programs through scheduled phone conversations, real-time computer conference systems, e-mail exchanges and special listservs for subgroups of students.

Graduate Student Organizations. Through on-campus discipline-based student clubs and graduate student organizations, graduate students can meet with peers who share similar academic interests and goals as well as with others representing a variety of backgrounds and experiences. Graduate students from underrepresented groups also often form organizations to share their perspectives, exchange information, and provide mutual support and encouragement. To experience some

of these group benefits, students in distance programs can use electronic bulletin boards to exchange information about a particular area of study or other topics, and they can use special listservs and form computer-mediated chat groups.

Special events. On-campus presentations by faculty members and visiting lecturers expose students to new knowledge and perspectives and offer opportunities to interact with diverse scholars. Distance programs can provide comparable learning opportunities as well as exposure to experts around the world through CD-ROMs, videoconferences or computer conferencing on the World Wide Web. The benefits of scholarly interaction can be experienced through discussion immediately following the presentation and through follow-up discussion in subsequent on-line communications between audience members and the speaker.

Information and Instructional Resources. In delivering academic programs, universities need to ensure that all students have appropriate access to instructional materials, facilities and services needed to complete program requirements. Even though students in technologically-based distance programs are expected to be proficient in using the technology, it is good practice to have consultation available to students and faculty alike for technical assistance and troubleshooting.

On-campus graduate programs typically are structured around information and instructional resources and research facilities that are readily available within campus borders. Students in a geographically distributed distance delivery program cannot rely on the availability of traditional facilities. Universities thus need to work out the logistics of enabling distance students to access physical or online bookstores to acquire needed course materials and to access physical or online libraries and librarians to complete assignments and do research. Course home pages can be designed to direct students to CD-ROMs, Internet searches and electronic connections to library and other data collections.

Recent developments in digital libraries and their centralized management and support systems enable users to get identical services from a distance as well as on site; so physical access to a library is not essential for some scholarly activities. From virtually anywhere, users with appropriate technology can access these libraries' online catalogues and search various computerized databases, and they can use their phone, fax or e-mail to order books, documents or journal articles for home or office delivery via regular mail, fax or e-mail. Some libraries also have toll-free telephone assistance from reference librarians that is analogous to that provided *in situ*, and they also provide bibliographic instruction to teach students how to identify materials, use various databases, and request materials. This kind of access to academic librarians is important for successful use of instructional resources.

Laboratory and Research Facilities. In some instances, course research assignments can be accomplished through computer simulations. When hands-on research in an actual laboratory is necessary, universities need to make

appropriate arrangements for distance students to have this experience at different sites—for example, at university-owned facilities, at another institution or at an employee's workplace.

Student Support Services. With respect to overall communication and interaction with students, the general principles of good practice remain constant, regardless of the mode of educational delivery. University publications, program descriptions, and other information sources should be honest, accurate and informative.

In addition to ascertaining that admitted students have appropriate background education, achievement and skills (including any necessary computer skills) to begin a program, graduate schools should ensure that students have access to needed information, support services and academic guidance and mentoring. For distance as well as for on-campus students, student services should be designed to improve responsiveness, increase convenience, and possibly over time, reduce costs.

Providing distance (and other) applicants access to information sources through toll-free phone numbers or e-mail is a helpful practice. Universities that already have developed online application and registration will find accommodating distance education students relatively easy. Others might use phone, facsimile, e-mail or regular mail for applications, registration, drops and adds, and so on.

Academic Advising. Graduate schools must assure that each student has regular access to expert advice on university and program requirements and has an appropriate plan of study. In a distance mode, graduate faculty or professional advisors can supplement written information by providing academic and career-related counseling through synchronous interaction (e.g., via telephone or in person at specified sites for students within a given location) or through asynchronous communication (e.g., by e-mail, fax or regular mail).

Counseling. Graduate study is demanding and challenging, and it often is a stressful experience. Distance students (as well as many on-campus students) who are combining study with employment, family and perhaps other responsibilities might need counseling to help them deal with their life situations. Surveys of student services for distance students indicate that provision of counseling services is as yet an underdeveloped area. Graduate schools might ask university counseling centers to explore whether they can make arrangements for counseling services with providers in selected locations or else develop a listing of appropriate referrals or sources of referrals comparable to listings they provide to on-campus students.

Financial Aid Advising. All admitted students should be given accurate assessments of the costs that they will incur in graduate study. Distance as well as on-campus students often need financial aid to complete their studies, and they need good advice about available assistance from university and external sources. Financial advising can be accomplished by the same mechanisms suggested for academic advising.

Insofar as federal financial assistance is concerned, we are in a period of likely transition. Acknowledging the impact of distance education in higher education, the 105th United States Congress and the Clinton administration are especially attentive to new electronic delivery systems and new institutions using them. What is happening legislatively on a national level may impinge on all institutions' effective delivery of distance education. At the time of this writing (late Spring 1998), both the House and Senate are debating the Reauthorization of the Higher Education Act of 1965 (HEA)--the federal law that provides the statutory authority for student financial aid and for the quality-assurance accreditation structure.

One issue in the current debate concerns financial aid for distance learners. In 1992, Congress acted on its concern about fraud and abuse by placing restrictions on financial aid for students who receive the majority of their education from a distance (e.g., through electronic media). Powerful interests representing many institutions with financial and geographic needs for distance education are pushing for change. Particularly compelling are issues related to providing higher education to underserved populations.

Currently both legislative branches have bills that include new Distance Education Demonstration Programs, which will authorize experiments at selected institutions and allow federal student aid to distance education students who are presently ineligible. Action on final legislative language and new regulations on the demonstration sites will need to be completed before the experimental programs can begin.

Very likely, the experimental program that comes out of the passage of the HEA reauthorization will not please everyone, but it will allow limited expansion. Commercial and private sector programs that are not dependent upon federal student financial assistance will also continue. Together, they will provide information to permit a more complete debate when the next reauthorization period begins. Competition and technology development could also bring this topic to the Congress out of the normal reauthorization sequence if there is sufficient public demand.

Distance Education Outcomes. In distance as well as in on-campus graduate programs, high quality outcomes are dependent on the quality elements embedded in the overall program design, delivery and evaluation. Best practices in this regard include:

select academic content appropriate for mastery in the discipline at the specified degree level;
formulate and communicate learning objectives;
organize learning activities around measurable learning outcomes;
use appropriate delivery systems, media, and materials to accommodate different
learning styles and to facilitate student achievement of these outcomes;
regularly evaluate students' progress and provide feedback on their performance;
periodically evaluate the effectiveness and currency of the program's content, processes, and support systems; and
regularly evaluate student outcome products and the impact of the program on
students' subsequent careers.

In this publication we have repeatedly emphasized the importance of maintaining high quality standards and following best practices, such as those listed above, in all academic programs offered by an institution. We have already discussed both input and process issues, policies, and practices that might need consideration by graduate deans and councils in judging the essential equivalency between a distance graduate program and its on-campus or generic high-quality counterpart. Program outcomes, of course, are the capstone of this comparative evaluation.

The quality and equivalency of outcomes can be judged in terms of many measures. Applying a type of "Turing test," we might conclude that equivalency exists if expert judges cannot distinguish between the outcomes from an on-campus and distance program--just as Turing proposed (1956) that a computer could be judged to "think" if its problem solving output was indistinguishable from that of a human.

Student Evaluations. Program evaluators will want to know whether there are substantive differences in course and instructor evaluations by distance versus on-campus students. In addition to the identical comparative measures, distance evaluations might include specific questions about the delivery systems, materials and methods to provide feedback for future improvement.

Faculty Evaluations. Comparative judgments by faculty regarding the quality of the educational experience and student achievement provide another indicator of program success. In addition, faculty satisfaction with the distance delivery and interaction mechanisms and their suggestions for improvement can be useful in future applications.

Student Achievements. For programs that involve capstone examinations (e.g, qualifying, comprehensive or dissertation examinations), program faculty or external evaluators can judge the equivalence of distance and on-campus students' performances on these measures of learning. Similarly, experts can judge the quality of distance students' theses and dissertations to determine whether they are indistinguishable from those of on-campus students. Some distance programs (e.g., master's programs that do not involve capstone measures that can be compared with on-campus outcomes) present more of a challenge for evaluation. In these instances,

assistance might be sought from university or external experts in educational evaluation.

Student Career Outcomes. It is good practice for graduate schools to gather and maintain comprehensive data on all students' completion rates, time-to-degree, and job placement in at least the first post-degree employment (or first professional position beyond a postdoctoral appointment for doctoral recipients). Distance and on-campus students may not be equivalent on these measures, given some likely initial population differences; however, comparisons can provide valuable information for program review and development.

FINALE

In implementing high quality graduate distance education, graduate deans face many challenges from many directions. Legislators, university boards or presidents may exert pressures to increase enrollments and revenues and respond to employers' demands for more post-baccalaureate education. Faculty, on the other hand, may resist undertaking distance education because of the time commitment for training and other previously noted concerns. Dealing with cross-pressures is, of course, inherent in a graduate dean's role; and as in other situations, the graduate dean must provide leadership and seek solutions while articulating standards of excellence that maintain the quality of the graduate enterprise.

As this document attests, graduate distance education is a work in progress rather than a finished product. The guidelines provided in this publication are not intended to be proscriptive, and they certainly are not all-inclusive. However, CGS presents them in the hope that they will be useful to graduate deans, councils, and faculty in considering whether to offer distance graduate programs, how to offer them if a positive decision is made, and how to ensure their quality.

The final word in this publication is not ours, but yours--the CGS memberships'. In an early phase of the preparation of this document, we sent a CGS listserv request for sample policies institutions had adopted for distance graduate education. Several deans responded with their products, but far more e-mailed or phoned to ask that we share what we received since their councils currently were "working on this." Because good models can be invaluable in speeding what often proves to be a slow governance process, for the good of the order, we invite you to send us information on how to access policies that you have developed which you consider helpful exemplars. Assuming that the policies are accessible through your home page, please send us the name of the document and the appropriate web address to <distance@cgs.nche.edu>, and CGS will add it to this document's reference list.

REFERENCES

American Council on Education. (1996). *Guiding principles for distance learning in a learning society.* Washington, DC: Author.

Borchert, M. A. (1994). *Master's education: A guide for faculty and administrators.* Washington, DC: Council of Graduate Schools.

Boyer Commission on Educating Undergraduates in the Research University. (1998). *Reinventing undergraduate education: A blueprint for America's research universities.* University of New York Stony Brook.

Committee on Science, Engineering, and Public Policy of the National Academy of Sciences, The National Academy of Engineering, and the Institute of Medicine. (1995). *Reshaping the graduate education of scientists and engineers.* Washington, DC: National Academy Press.

Council for Higher Education Accreditation, The Institute for Higher Education Policy. (1998). *Assuring quality in distance learning.* Washington, DC: Author.

Council of Graduate Schools. (1977). *Non-residential graduate degree programs.* Washington, DC: Author.

Council of Graduate Schools. (1989). *Off-campus graduate education.* Washington, DC: Author.

Council of Graduate Schools. (1990). *Organization and administration of graduate education.* Washington, DC: Author.

Council of Graduate Schools. (1998). *Certificates: A survey of our status and review of successful programs in the U.S. and Canada.* Washington, DC: Author.

Dolence, M. G. (1998 January/February). The new golden rules of learning. *Trusteeship*, 24-28.

Gurak, L. J. The promises and perils of graduate education in cyberspace. (1997). *Proceedings of the 53rd Annual Meeting of the Midwestern Association of Graduate Schools*, 63-67.

Instructional Telecommunications Council. (1998). *New connections: A guide to distance education.* Washington, DC: Author.

LaPidus, J. B. (1989). Graduate education—the next twenty-five years. Paper presented at the 25th anniversary event, faculty of graduate studies, University of Guelph, Ontario, Canada.

National Center for Education Statistics. (1997). *Distance education in higher education institutions.* (NCES 98-062). Washington, DC: U.S. Department of Education.

Noon, L. P. (1997). The University of Phoenix approach to delivering graduate programs through distance education. *Proceedings of the 53rd Annual Meeting of the Midwestern Association of Graduate Schools*, 43-48.

Pennsylvania State University. (1997). *Guidelines for submitting proposals for off-campus graduate degree programs*. State College: Office of the Dean of the Graduate School.

Peterson's guide to distance learning programs. (1998). Princeton, NJ: Peterson's.

Peterson's guide to graduate and professional programs: An overview 1997. (1997). Princeton, NJ: Peterson's.

Turing, A. M. (1956). Can a machine think? In J. R. Newman (Ed.), *The world of mathematics*: Vol. 4. New York: Simon & Schuster.

Twigg, C. A. (1997, September/October). Putting learning on track. *Educom review*, 60.

Western Cooperative for Educational Telecommunications. (1997). *Good practices in distance education*. Western Interstate Commission for Higher Education.

Witherspoon, J. P., (1997). *Distance education: A planner's casebook*. Western Interstate Commission for Higher Education.

Young, J. R. Rethinking the role of the professor in an age of high-tech tools. (1997, October 3) *The Chronicle of Higher Education*, pp. A 26-28.

ELECTRONIC REFERENCES

Council of Graduate Schools. *Preparing Future Faculty (PFF)*. <http://www.preparing-faculty.org/>.

Pennsylvania State University. *Residency and Related Policies for Off-Campus Graduate Programs*. Available through "residency requirements" link at <http://www.gradsch.psu.edu/policies/offcampus.shtml>.

United States Government. *Electronic Commerce Policy*. <http://www.ecommerce.gov>

University of California at Berkeley. *MUDs, MOOs, MUSHs*. <http://www.itp.berkeley.edu/~thorne/MOO.html>.

University of Illinois. *Intellectual Property Subcommittee's Report on Courseware Development and Distribution*.<http://www.vpaa.uillinois.edu/policies/courseware.htm>

Yale University School of Medicine. *Yale Web Style Guide*. <http://info.med.yale.edu/caim/manual/contents.html>.

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